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|  | UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN |
|  |  **Course sylabus – part A** |
| **48SJ-PHAT33** | **Pharmacology and Toxicology 3/3** |
| **2024L** |  |
| **ECTS: 9.00** |  |

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| **SUBJECT MATTER CONTENT:**Eicosanoids: prostaglandins, thromboxanes, leucotrienes and related compounds NSAIDs, disease-modifying rheumatic drugs, non-opioid analgesics and drugs used in gout. Drugs used in the treatment of blood diseases - Anemia treatment; hematopoietic growth factors -Drugs used in the treatment of coagulation disorders Drugs used in respiratory diseases. Pediatric and geriatric pharmacology. Drugs used in dermatology and ophtalmology. Monoclonal antibodies used in medicine Endocrine drugs - Pituitary, hypothalamic hormones - Adrenal glands hormones - Drugs affecting bone mineral homeostasis Chemotherapy of cancer. Immunopharmacology.Opioid analgesics and their antagonists. Drugs used in migraine treatment. Treatment of other headaches. Drugs used in the treatment of gastrointestinal diseases Endocrine drugs- part II - Thyroid and antithyroid drugs - Pancreatic hormones, anti- diabetics Toxicology Interaction between drugs. Adverse effects of drugs. Lifestyle drugs and drugs in sport. Biopharmaceuticals and gene therapy.Analgesics and their antagonists Drugs used in respiratory diseases Drugs used in thetreatment of gastrointestinal diseases Endocrine drugs Chemotherapy of cancer Interaction between drugs. Adverse effects of drugs.**TEACHING OBJECTIVE:**The student learns about individual groups of medicinal products, theirmechanisms and effects of action, basic indications and contraindicationsand basic pharmacokinetic and pharmacodynamic parameters;Preparation to acquire practical skill in writing prescriptions.**DESCRIPTION OF THE LEARNING OUTCOMES OF THE COURSE IN RELATION TO THE DESCRIPTION OF THE CHARACTERISTICS OF THE SECOND LEVEL LEARNING OUTCOMES FOR QUALIFICATIONS AT LEVELS 6-8 OF THE POLISH QUALIFICATION FRAMEWORK IN RELATION TO THE SCIENTIFIC DISCIPLINES AND THE EFFECTS FOR FIELDS OF STUDY:****Symbols for outcomes related to the discipline:**M/NMA\_P7S\_WG+++++++++++++++++++++++++++++**Symbols for outcomes related to the field of study:**K.1.+, K.2.+, K.3.+, K.4.+, K.5.+, K.6.+, K.7.+, K.8.+, C.U13.+, C.U14.+, C.U15.+, C.U16.+, C.U17.+, C.U18.+, C.U19.+, E.U17.+, E.U18.+, E.U19.+, C.W38.+, C.W39.+, C.W40.+, C.W41.+, C.W42.+, C.W43.+, C.W44.+, C.W45.+, C.W46.+, C.W47.+, C.W48.+**LEARNING OUTCOMES (Knowledge, Skills, Social competence):**

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| **K1**  | The student can establish and maintain a deep and respectful contact with the patient. He is guided by the good of the patient, placing them in the first place. Respects medical confidentiality and patient's rights. He is aware of his own limitations and the ability to constantly improve his skills. |
| **U1**  | The student demonstrates the ability to use drugs in the therapy of specific diseases. He can prescribe medicines. Knowing the main groups of drugs that interact, can apply the drug in a given group of patients, e.g. older people, children |
| **W1**  | The student is able to discuss the mechanisms of action of drugs, adverse effects, toxic, as well as possible interactions that may appear during polytherapy. Has knowledge of the indications, contraindications and dosage of drugs. He knows the rules for the use of antimicrobials, the principles of treatment for poisoning. Has knowledge of the pharmacology of developmental and geriatric age |

**TEACHING FORMS AND METHODS:**

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| Classes-['W1', 'U1', 'K1']-Pharmacotherapy drug cases, prescribing drugs-Eicosanoids: prostaglandins, thromboxanes, leucotrienes and related compounds NSAIDs, disease-modifying rheumatic drugs, non-opioid analgesics and drugs used in gout. Drugs used in the treatment of blood diseases - Anemia treatment; hematopoietic growth factors -Drugs used in the treatment of coagulation disorders Drugs used in respiratory diseases. Pediatric and geriatric pharmacology. Drugs used in dermatology and ophtalmology. Monoclonal antibodies used in medicine Endocrine drugs - Pituitary, hypothalamic hormones - Adrenal glands hormones - Drugs affecting bone mineral homeostasis Chemotherapy of cancer. Immunopharmacology. |
| Seminar-['W1', 'U1', 'K1']-students' multimedial presentations-Opioid analgesics and their antagonists. Drugs used in migraine treatment. Treatment of other headaches. Drugs used in the treatment of gastrointestinal diseases Endocrine drugs- part II - Thyroid and antithyroid drugs - Pancreatic hormones, anti- diabetics Toxicology Interaction between drugs. Adverse effects of drugs. Lifestyle drugs and drugs in sport. Biopharmaceuticals and gene therapy. |
| Lecture-['W1', 'U1', 'K1']-Multimedia presentation-Analgesics and their antagonists Drugs used in respiratory diseases Drugs used in thetreatment of gastrointestinal diseases Endocrine drugs Chemotherapy of cancer Interaction between drugs. Adverse effects of drugs. |

**FORM AND CONDITIONS OF VERIFYING LEARNING OUTCOMES:**

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| Classes-(Colloquium test)-['W1', 'U1', 'K1']-60 % |
| Lecture-(Colloquium test)-['W1', 'U1', 'K1']-60 % |
| Seminar-(Colloquium test)-['W1', 'U1', 'K1']-60 % |

**Literature:**

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| 1. ***Basic and Clinical Pharmacology 16e***, Todd W. Vanderah, McGraw Hill, 2024, Strony: 1368, Tom:1 (literatura podstawowa)  |

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| **Legal acts specifying learning outcomes:** 672/2020**Status of the course: Obligatory****Group of courses: A****Discipline**: Medical Sciences**Program:** All**Form of studies: full-time****Level of studies: uniform master’s studies** |

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| **Introductory subject:** human biochemistry, physiology and pathophysiology**Prerequisites:** Knowledge of basic information aboutprocesses taking place in the bodycellular, organ and. levelsystemic; understanding pathomechanismsdevelopment of circulatory system diseases,respiratory, digestive, nervous andhormonal. |

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| **Coordinators:****Piotr Jakubowski, piotr.jakubowski@uwm.edu.pl****Michał Majewski,**  |

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|  | UNIVERSITY OF WARMIA AND MAZURY IN OLSZTYN |
|  | **Detailed description of ECTS credits awarded - part B** |
| **48SJ-PHAT33** | **Pharmacology and Toxicology 3/3** |
| **2024L** |  |
| **ECTS: 9.00** |  |

The number of ECTS credits awarded consists of:

1. Contact hours with the academic teacher:

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| - participation in:  | 15 h |
| - participation in:  | 30 h |
| - participation in:  | 30 h |
| - consultation | 5 h |
|  | Total: 80 h |

2. Independent work of a student:

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| Studying for exam | 60.00 h |
| Studying for classes and seminars | 85.00 h |
|  | Total: 145.00 h |

Total (contact hours + independent work of a student): 225.00 h

1 ECTS credit = 25-30 h of an average student’s work, number of ECTS,

ECTS Points = 225.00 h : 25 h/ECTS = **9.00** ECTS

Average: 9.00 ECTS

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| - including the number of ECTS credits for contact hours with the direct participation of an academic teacher | 3.20 ECTS |
| - including the number of ECTS credits for hours of independent work of a student | 5.80 ECTS |